Supporting Information

Facile Synthesis of B- and N-co-doped Photoluminescent Inorganic-Organic Hybrid Carbon Dots towards Efficient Lubrication Additive

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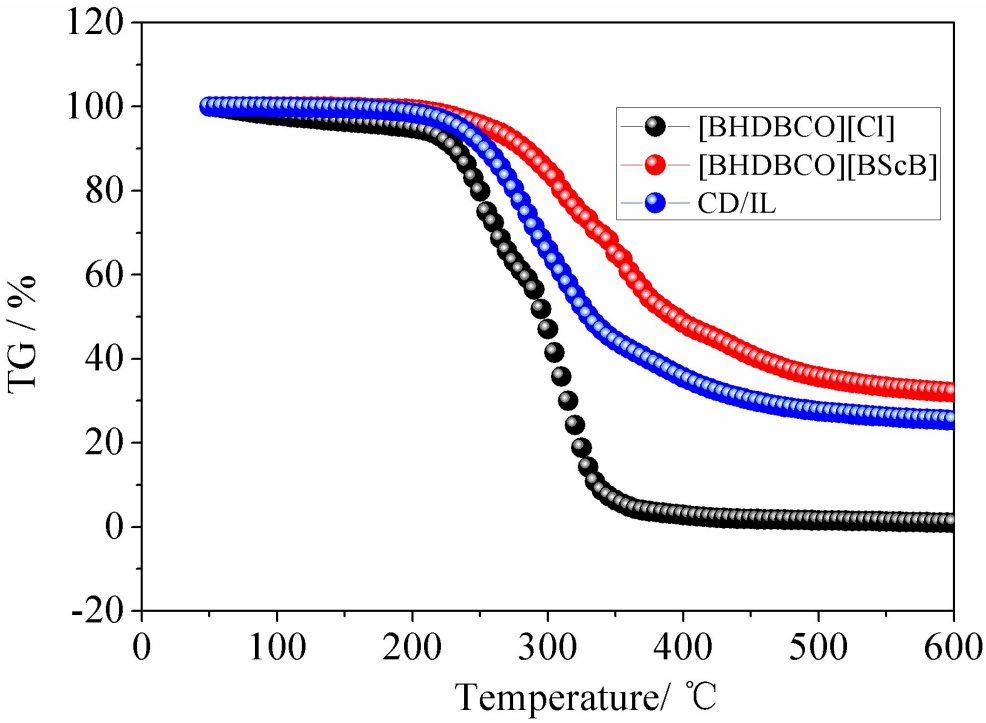

Fig. S1 TG spectra of [BHDABCO][Cl], [BHDABCO][BScB] and CD/IL in a nitrogen atmosphere.

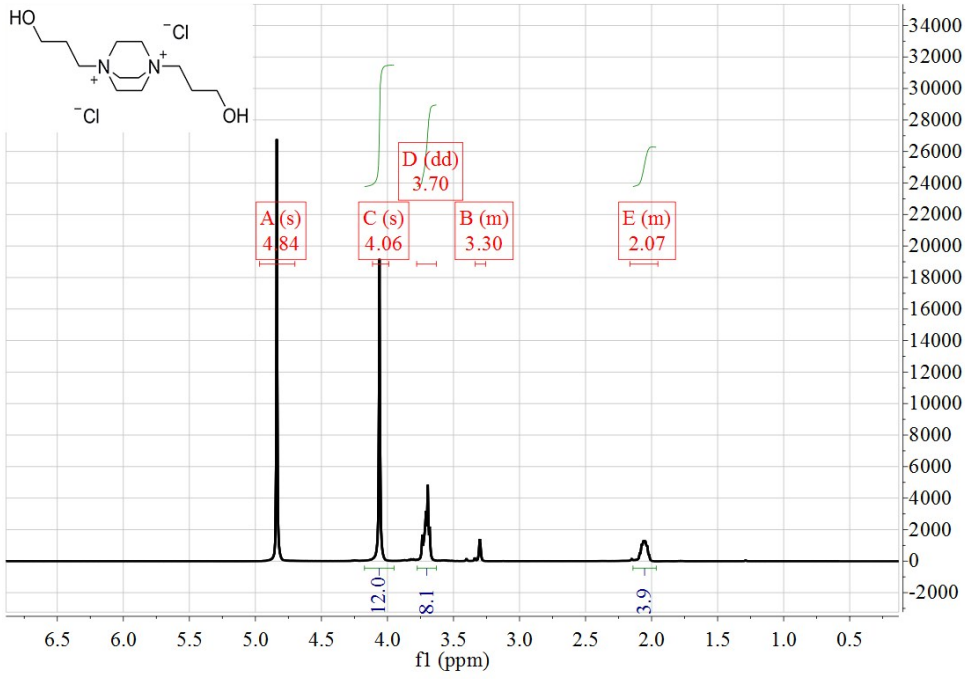

Fig. S2 Structure and ^{1}H NMR(MeOD) of [BHDABCO][Cl]

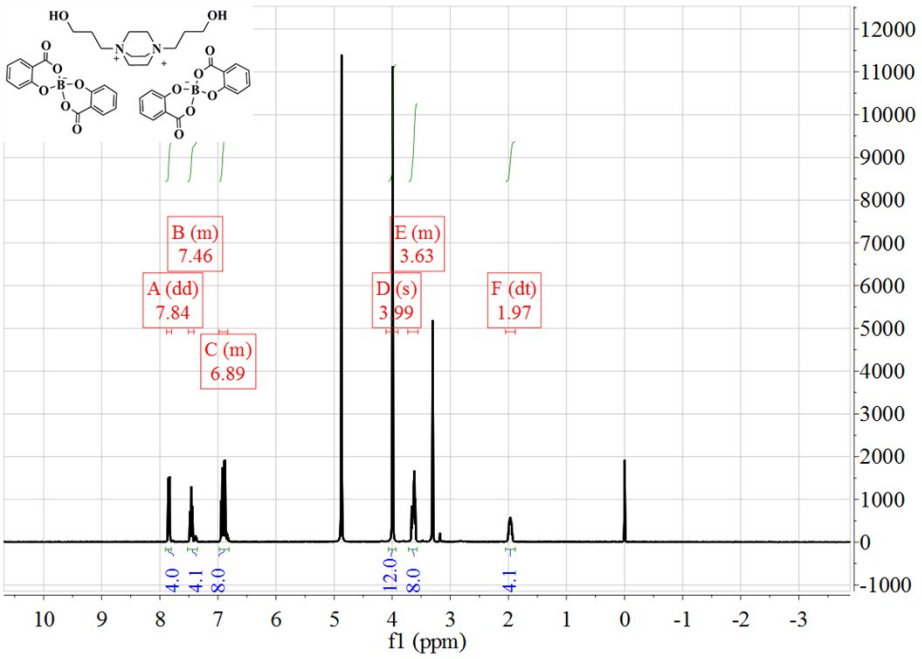

Fig. S3 Structure and ^{1}H NMR(MeOD) of [BHDABCO][BScB]

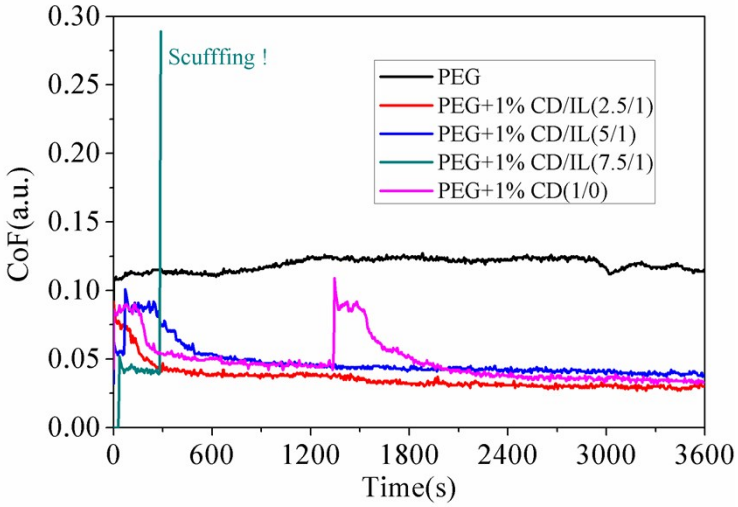

Fig. S4 The effect of the ratio of L-glutamic acid and [BHDBCO][BScB] on the tribological performance of CD/IL. The concentration is 1Wt%.Test condition: 588N, 75°C, 1h.

Note: 2.5/1, 5/1, 7.5/1 are the mass ration of L-glutamic acid and [BHDBCO][BScB] and 1/0 means the precursor for CDs is L-glutamic without [BHDBCO][BScB].

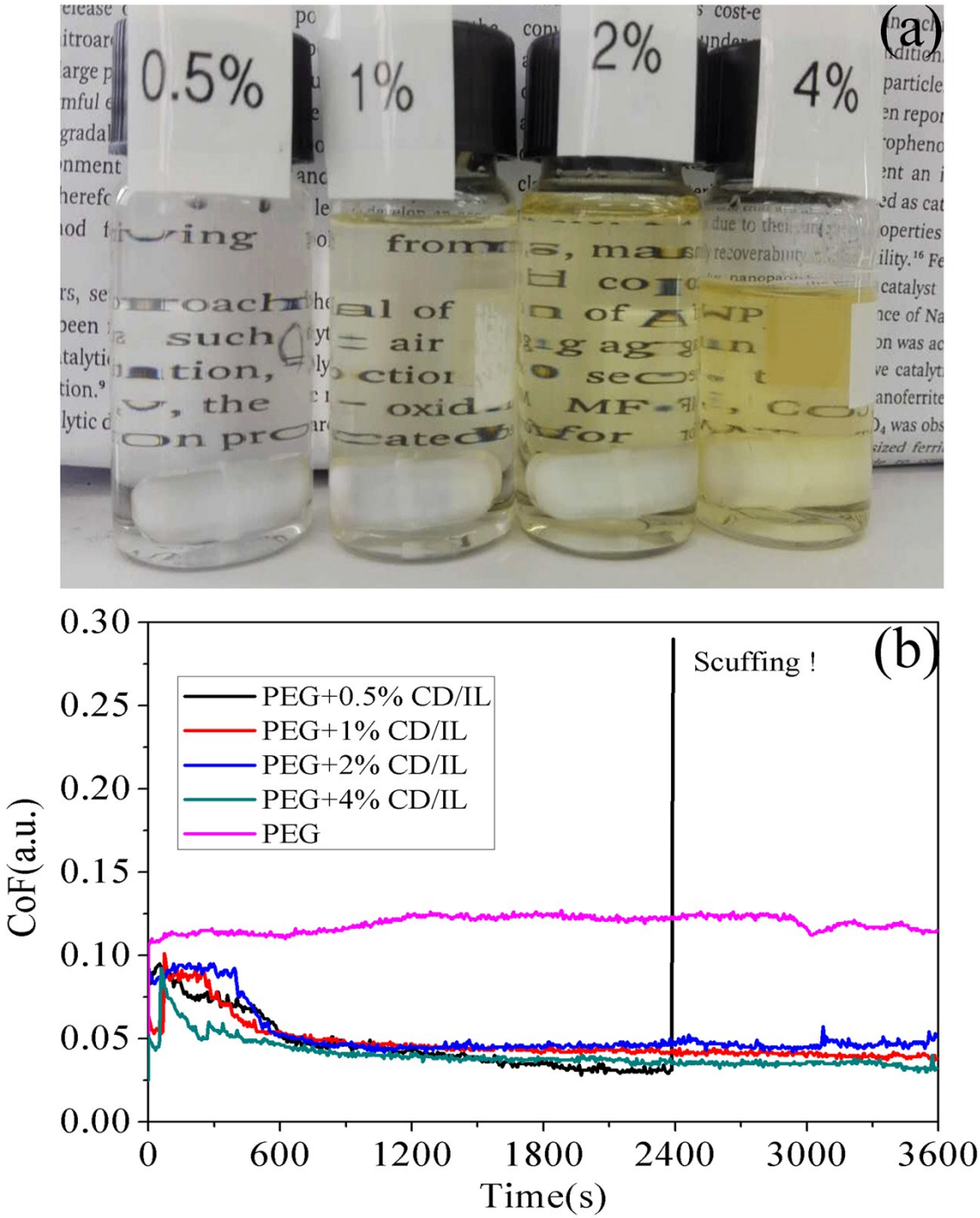

Fig. S5 Photograph(a) and coefficient of friction(CoF) traces of lubricant mixtures of 0%, 0.5%, 1%, 2%, 4% CD/IL in PEG(b).

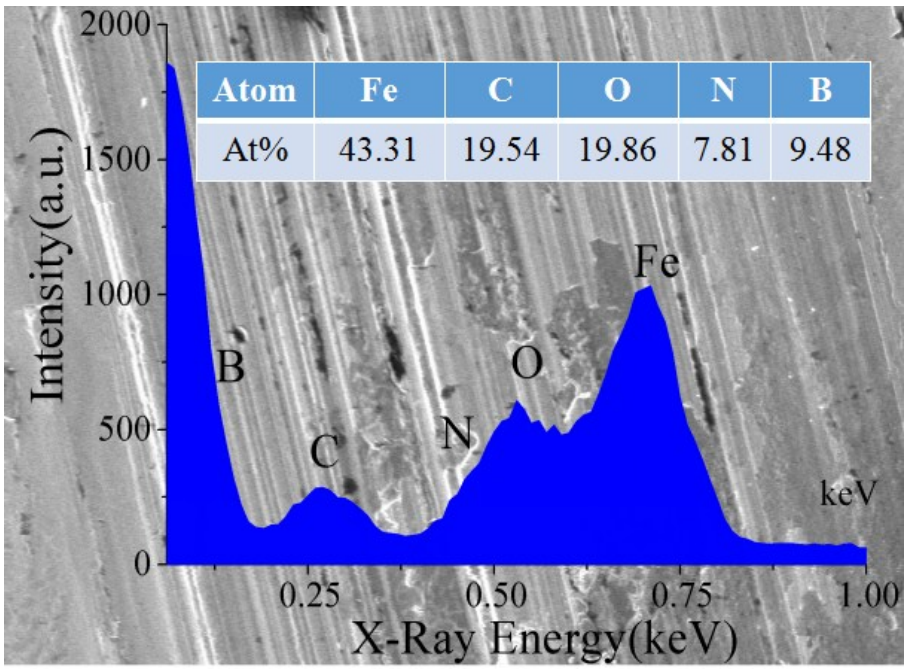

Figure S6 SEM, EDX spectra and element distribution on the wear scar lubricated with PEG200+1% under 588N, 1h and 75°C.